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Sedimentary Rocks

are formed when small pieces of parent rock are compressed into larger rock formations. The Badlands are made up of several sedimentary rock formations.

Erosion causes sedimentary rocks to be broken down into smaller pieces again.



Window

A window is evidence of erosion. The harder sandstone above the window resists erosion. The mudstone that was the "glass" in the window has eroded, leaving the opening behind that we call a window.



Hoodoos and Caprocks

Where solid sandstone rests on top of soft mudstone, wind and water will unevenly erode the rock layers. The mudstone will erode at a much faster rate than the sandstone, forming a "caprock." The combination of sandstone caprock over mudstone "stem" creates mushroom-shaped hoodoos.



Medicine Route Gravels

Medicine Route Gravels look out of place in the Badlands; they contain the only *metamorphic* (changed through extreme heat and pressure) rocks found here. The parent rock of these gravels originated in the Black Hills. Swift rivers that once flowed across this region transported them here. They are pieces of the Black Hills!



Chalcedony

Chalcedony is a type of quartz crystal. Quartz is a mineral found in sand, sandstone and many other rocks.



Sod Table

Where sediments have been washed from the buttes onto the prairie; water secondarily carves them into low sod tables. Grassy tops and vertical sides characterize these sod tables. A close inspection will reveal records of recent events: charcoal lines from prairie fires, camp hearths left by people who have lived here for the past 12,000 years, and bleached bones of bison and other modern animals.



Slump

Think about what happens when you slump in your chair. You compress your shoulders and back downward. During landsliding the ground becomes compressed or slumped. The depression that forms in the slumped area catches water, thereby supporting more plant and animal life than areas that do not retain water. Hence, slumps are oases of life in the otherwise stark Badlands.



Black Hills

The sediments that make up the sedimentary rocks in the Badlands came from the Black Hills. Rivers carried sand, silt, and gravel away from the Black Hills.



Erosion is the wearing away of soil and rock by weathering and the action of streams, glaciers, waves, wind, and groundwater.





Paleosols

Horizontal red stripes distinctively appear as part of the Brule Formation. They are "fossil soils" called paleosols. Ancient soils are evidence of the organic activity that once occurred as part of soil formation. Oxygen-rich iron creates the red, rust-like color.